

XXII. *On the genus Henriquezia of Spruce.* By GEORGE BENTHAM, Esq., V.P.L.S.

Read February 3rd, 1859.

THIS genus is one of the many interesting new ones discovered by Mr. Spruce in Northern Brazil and Venezuela. Some years since, I published the first species received from him, in the 6th vol. of Sir W. Hooker's Kew Journal of Botany; but at that time the fruit was not known. Since then Mr. Spruce has transmitted fine flowering specimens of a second species, and fruits of two more, which, from their foliage, appear to be distinct from the flowering ones. I am thus enabled to complete the generic character, and to lay before the Society the accompanying illustrations from the artistic and accurate pencil of Mr. Fitch.

It will be observed that these trees have stipules, an inferior ovary, and five perfect, nearly equal stamens; and yet they undoubtedly belong to the family of *Bignoniaceæ*. The affinity which I formerly alluded to, with *Platycarpum* of Humboldt and Bonpland, is fully confirmed by these specimens, as well as by one or two fruiting specimens of the true *Platycarpum* gathered on the Orenoco by Mr. Spruce, which show that that genus also has stipules, although, as in the first-received specimens of *Henriquezia*, they had not been observed, being very deciduous. In *Platycarpum* the ovary is figured as superior. I have not seen the flowers; but on the fruit there is an external scar at the base, which shows that there had been a partial adherence to the calyx. In *Henriquezia* the ovary at the time of flowering is entirely below the adherent part of the calyx. After fecundation it gradually emerges, and the ripe fruit shows about its centre a transverse convex line or scar left by the free part of the calyx on falling off. The fruit is nearly flat and hard as in *Platycarpum*, but much larger and more woody; and instead of opening out vertically in four valves which remain attached by the central line formed by the axial entire dissepiment, it opens horizontally to a little below the middle in two entire valves, down the centre of each of which, in the inside, is a raised line, being the remains of the dissepiment. In each cell are four large flat seeds, remarkable, at least in Mr. Spruce's specimens, for their tendency to germinate whilst the capsule is yet attached to the tree,—the radicle lengthening out, twisting round the seeds, and forming a kind of network, the origin of which was very puzzling till I had carefully soaked the seeds and traced it out.

The genus, as I stated in the above-mentioned article, was dedicated by Mr. Spruce to Senhor Henriquez Antonij, a native of Leghorn, but for more than thirty years settled at the Barra do Rio Negro, where he has constantly rendered every assistance to scientific and other travellers during that period. The species are all described as trees of great beauty, and some of them of considerable size. The following are the technical characters:—

HENRIQUEZIA, Spruce. Benth. in Hook. Kew Journ. Bot. vol. vi. p. 338.

(Genus e familia Bignoniacearum.)

*Calyx* basi turbinatus ovario adhærens, limbo supero, 4-fido v. 4-partito, circumscisse deciduo. *Corolla* oblique infundibularis, fauce ampla, limbo 5-lobo, laciniis subæqualibus, æstivatione bilabiata. *Stamina* 5, corolla breviora, 2 inferiora cæteris paullo breviora; antheræ subæquales, lineari-oblongæ, omnes fertiles. *Ovarium* per anthesin inferum, disco carnosio breviter cupulato v. annulato coronatum, biloculare, post anthesin semisuperum. *Ovula* in quoque loculo 4, axi collateraliter affixa, horizontalia v. subadscendentia. *Stylus* filiformis, apice bilobus, lobis seu lamellis lineari-oblongis, complanatis, intus stigmatosis, mox revolutis. *Legumen* compressum, lignosum, bivalve, valvulis integris, dissepimento lineari valvis contrario, maturitate divisio. *Semina* in quoque loculo 4, magna, plano-compressa, hilo lineari affixa. *Testa* tenuis, laxiuscula. *Cotyledones* subcarnosæ, basi profunde bilobæ.

*Arbores* Brasiliæ borealis et Venezuelæ. *Folia* 3–5-natim verticillata, coriacea, integerrima, pennivenia. *Stipulæ* lineares v. lanceolatæ, rigidæ, caducæ. *Flores* speciosi, in paniculas densas terminales dispositi.

1. HENRIQUEZIA VERTICILLATA, Spruce, *l. c.*; foliis subquinis anguste oblongis subacuminatis basi acutis, venis primariis valde obliquis subtus prominentibus, calycis 4-fidi laciniis lanceolatis, corolla extus cano-sericea.

*Arbor* pulcherrima, 50 ad 100 pedes alta, trunco 4 pedes crasso, ramis summis fastigiatis subquinatim verticillatis, ramulis inflorescentiaque ferrugineo-tomentellis mox glabratiss. *Folia* pleraque 5-natim verticillata, petiolata, in speciminibus suppetentibus 8–10 poll. longa,  $2-2\frac{1}{2}$  poll. lata, inferiora verosimiliter majora, obtusiuscula v. breviter et acute acuminata, integerrima, basi cuneato-acuta, glaberrima, coriacea, supra nitidula, subtus costa media venisque primariis obliquis valde elevatis percursa, rete venularum vix conspicuo. *Petiolus*  $\frac{1}{2}$ –1-pollicaris, basi dorso sub insertione cicatrice stipularum deciduarum signatus. *Stipulas* ipsas non vidi. *Panicula* terminalis, intra folia summa subsessilis, late thyrsioidea, ferrugineo-tomentella, ramis crassis subcompressis verticillatis et dichotome cymiferis. *Calyx* incurvus, crassus, circa 6 lin. longus, extus ferrugineo-tomentosus, intus sericeus, limbus ad medium divisus in lacinias 4 lato-lanceolatas acutas æstivatione vix imbricatas, quarum infima parum latior. *Corolla* sesquipollicaris, extus tomento sericeo appresso in sicco canescens, in vivo rosea, intus alba, glabra, exceptis laciniis puberulis et serie pilorum flavicantium secus lineam mediam labii inferioris, necnon pilis nonnullis ad basin faucis. *Stamina* glabra, infra medium tubi inserta. *Antheræ* longæ, medifixæ, biloculares, longitudinaliter dehiscentes. *Stylus* basi glaber, apice in lamellas oblongas birto-stigmatosas divisus. *Discus* epigynus brevis, crassiusculus, pubescens. *Capsula* non visa.

One of the finest trees met with by Mr. Spruce in his voyage up the Rio Negro in December 1851. It was frequent in the Gapó, from above Barraroá to San Gabriel do Cachoeiras.

2. HENRIQUEZIA OBOVATA, Spruce, MS.; foliis quaternis obovato-oblongis obtusis retusivc basi rotundatis cordatisvc, venis primariis subtransversis subtus valde prominentibus, capsula transverse oblonga.

*Arbor* 40–60-pedalis. *Stipulæ* lanceolatæ, juniores 4–5 lin. longæ, a foliis adultis jam deciduæ. *Folia* (sec. Spruce) constanter quaternatim verticillata, 4–5 poll. longa,  $2\frac{1}{2}$ –3 poll. lata, venis primariis a costa multo magis divergentibus quam in *H. verticillata*. *Flores* ignoti. *Capsula*  $2\frac{1}{2}$  poll. longa, 4 poll. lata. *Semina*  $1\frac{1}{2}$  poll. lata.

A single specimen was gathered by Mr. Spruce, in June 1854, in woods along the Guainia, or Upper Rio Negro, above the confluence of the Casiquiare.

3. *HENRIQUEZIA NITIDA*, Spruce, MS.; foliis longe oblongis obtusis crasso-coriaceis nitidis, venis vix prominulis, calycis 4-partiti laciniis subovatis acutis imbricantibus, corolla extus sericeo-villosa.

*Arbor* 30-pedalis, ramosissima. *Folia* (an constanter?) ternatim verticillata, 8-10 poll. longa, 2-3 poll. lata, basi angustata, utrinque viridia et nitida, costa utrinque prominula; venæ tamen primariæ parum conspicuæ et non prominentes. *Stipulæ* lineari-lanceolatæ, pollicares, rigidæ, persistentes. *Paniculæ* rami ternatim verticillati, dichotome cymosi, cano-tomentosi. *Calycis* limbus usque ad ovarium divisus; laciniæ 5 lin. longæ, tomentosæ, multo latiores quam in *H. verticillata*, marginibus imbricantibus. *Corolla* sesquipollicaris, rosea maculis nonnullis cinnabarinis notata, intus præter lineam pilorum flavicantium glabra, extus mollissime sericeo-villosa, fauce latiore quam in *H. verticillata*. *Fructus* ignotus.

Collected by Mr. Spruce in October 1854, on the banks of the Casiquiare, and distributed under the number 3690.

4. *HENRIQUEZIA OBLONGA*, Spruce, MS.; foliis anguste oblongis obtusis subcoriaceis opacis subtus pallidis, venis vix prominulis, capsula suborbiculari.

Possibly a variety of the *H. nitida*; but the specimens of the one being in flower only, of the other only in fruit, I do not think it safe to unite them, as the leaves do not quite agree. In the *H. oblonga* they are scarcely 6 inches long, although with longer petioles than in *H. nitida*, not so thick, and not nearly so shining, and much paler underneath. The stipules are nearly the same. The capsule is of the same woody consistence as in *H. obovata*, but not broader than long, being about 3 inches each way; it is marked with a similar slightly-arched transverse line, being the scar left by the limb of the calyx.

A small tree of about 18 feet in height, with few spreading branches; frequent on the Rio Atabapo, an affluent of the Orenoco near the mouth of the Casiquiare. There were only two or three specimens gathered by Mr. Spruce in June 1854, and numbered 3702.

## EXPLANATION OF THE PLATES.

### TAB. LII.

#### *Henriquezia verticillata.*

- Fig. 1. Calyx and style.  
Fig. 2. Corolla cut open.  
Fig. 3. Ovary, transverse section.  
Fig. 4. Ovary, vertical section.  
Fig. 5. The same shortly after flowering.

## TAB. LIII.

*Henriquezia obovata*.

- Fig. 1. Ripe fruit seen from one side.  
Fig. 2. The same, end view.  
Fig. 3. The same with one valve removed, showing the seeds entwined by the young roots.  
Fig. 4. A seed.  
Fig. 5. The same seen edgewise.  
Fig. 6. Embryo with the growing root.  
Fig. 7. The same with one cotyledon removed, showing the growing plumula.

## TAB. LIV.

*Henriquezia nitida*.

- Fig. 1. Calyx and style.  
Fig. 2. Corolla cut open.  
Fig. 3. Calyx and base of the style after the calyx-lobes have fallen off.  
Fig. 4. Ovary, transverse section.  
Fig. 5. Ovary, vertical section.